

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellant : Shane D. Pannell et al.  
Serial Number : 10/783,169  
Filing Date : February 19, 2004  
Title : *EXTERNAL CHEMICAL DISTRIBUTION  
SYSTEM AND METHOD*  
Confirmation No. : 7168  
Examiner : Kim, Christopher S.  
TC/Art Unit : 3752  
USPTO Customer No. : 26707  
Attorney Docket No. : 122308.00003

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**AMENDED APPEAL BRIEF**

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**Mail Stop Appeal Brief-Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Notification of Non-Compliant Appeal Brief mailed December 21, 2007, Appellant submits the following Amended Appeal Brief under 37 C.F.R. § 41.37 appealing the Final Rejection from the USPTO dated July 11, 2007.

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**I. REAL PARTY IN INTEREST**

PERIMICON, LLC, an Arizona limited liability company, having its principal place of business at 877 W. Ivanhoe Street, Chandler, Arizona 85225, is the real party in interest of the present application. Assignment documents transferring all rights, title, and interest in the present application to PERIMICON, LLC was executed by the inventors, and recorded by the U.S. Patent and Trademark Office at reel 015948, frame 0155.

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**II. RELATED APPEALS AND INTERFERENCES**

None.

### **III. STATUS OF CLAIMS**

The present application contains sixteen pending claims. Claims 1-73 are canceled. Claims 74-89 have been finally rejected in the Office Action of July 11, 2007.

A copy of claims 74-89, the claims on Appeal, is enclosed in the Claims Appendix.

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**IV. STATUS OF AMENDMENTS**

None.

**V. SUMMARY OF CLAIMED SUBJECT MATTER**

With respect to claim 74, the present invention is a chemical distribution system comprising a residential home (12), as shown on page 4, lines 14-18 and FIG. 1. The system includes a yard (14) in an exposed area adjacent to the residential home including a fence, gate, shrub, tree, swimming pool, patio, garden, grass area, play area, and concrete pad, as shown on page 5, lines 17-21 and FIG. 1. A hollow tubing (50) is disposed around each of a plurality of target areas in the yard including the fence, shrub, tree, garden, and grass area, see page 6, lines 27-29 and FIGs. 1-5. The tubing transports a chemical solution selected from the group consisting of pesticides, herbicides, fertilizers, animal retardants, and vegetation pre-emergence, see page 4, line 32 through page 5, line 7. The tubing is made of a chemical resistant material selected from the group consisting of polyethylene, polyurethane, nylon, and polypropylene, with a pressure rating of at least sixty pounds per square inch, see page 6, lines 31-34. The tubing has an inside diameter ranging from one-eighth inch to three-fourth inch and an outside diameter ranging from one-fourth inch to one inch, see page 6, line 34 through page 7, line 4. The tubing has a plurality of openings cut through its wall structure at selected points in accordance with government regulations and manufacturer's recommendations and corresponding to each of the plurality of target areas, see page 8, lines 11-19. The tubing includes a plurality of "Y" and elbow couplings for changing direction of the tubing to cover the plurality of target areas, see page 9, lines 29-30 and page

10, lines 32-33. The tubing is routed up and down structures that extend vertically above ground secured with pressure-fit clamps and otherwise laid above ground, as shown on page 7, lines 15-31, and page 11, lines 1-6, and FIGs. 1, 3-5. A plurality of spray nozzles (58) is inserted into the openings in the tubing for distributing the chemical solution to the selected target areas, see page 8, lines 19-32 and FIGs. 3-5. The spray nozzles are circular in shape, made of non-corrosive metal and having adjustable flow rates and spray patterns, as shown on page 8, line 33 through page 9, line 8. The invention further includes a truck for transporting the chemical solution to the residential home, see page 5, line 31 through page 6, line 3. The truck includes a hose for transporting the chemical solution to the tubing. The system includes first and second junction boxes (46) disposed below ground in a front area of the residential home, as shown on page 5, line 30 through page 6, line 26 and FIGs. 1 and 2. A first pressure regulator (68) is connected to the tubing within the first junction box for regulating pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 2. A first hook-up port (42) is disposed within the first junction box and having an output connected to a first end of the tubing, see page 5, line 30 through page 6, line 26 and FIGs. 1 and 2. The first hook-up port includes a lever arm (44) which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when connected to the hose from the truck as shown on page 6, lines 17-26 and FIG. 2. A second



hook-up port (42) is disposed within the second junction box and having an output connected to a second end of the tubing, as shown on page 5, line 30 through page 6, line 26 and FIGs. 1 and 2. The second hook-up port includes a lever arm (44) which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when connected to the hose from the truck, see page 6, lines 17-26 and FIG. 2. The first and second hook-up ports form a closed system to equalize pressure and distribution of the chemical solution, as shown on page 12, lines 14-17 and FIG. 1. A second pressure regulator (70) is coupled in a portion of the tubing which is located in a rear portion of the yard for regulating pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 1. A booster pump (70) is coupled in a portion of the tubing which is located in the rear portion of the yard for increasing the pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 1.

With respect to claim 78, the present invention is a fixed chemical distribution system comprising a residential home (12), as shown on page 4, lines 14-18 and FIG. 1. The system further includes a yard (14) in an exposed area adjacent to the residential home, as shown on page 5, lines 17-21 and FIG. 1. A hollow tubing (50) is disposed around each of a plurality of target areas within the yard, see page 6, lines 27-29 and FIGs. 1-5. The tubing transports a chemical solution selected from the group consisting of pesticides, herbicides, fertilizers, animal retardants, and

vegetation pre-emergence, see page 4, line 32 through page 5, line 7. The tubing is made of a chemical resistant material selected from the group consisting of polyethylene, polyurethane, nylon, and polypropylene, see page 6, lines 31-34. The tubing has a plurality of openings cut through a first portion of its wall structure in accordance with government regulations and manufacturer's recommendations and a plurality of pre-drilled openings formed in a second portion of the tubing, see page 8, lines 11-19. A plurality of spray nozzles (58) is inserted into the openings in the first and second portions of the tubing for distributing the chemical solution to the plurality of target areas, see page 8, lines 19-32 and FIGs. 3-5. First and second junction boxes (46) are disposed below ground in a front area of the residential home, as shown on page 5, line 30 through page 6, line 26 and FIGs. 1 and 2. A first pressure regulator (68) is connected to the tubing within the first junction box for regulating pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 2. A first hook-up port (42) is disposed within the first junction box and having an output connected to a first end of the tubing, see page 5, line 30 through page 6, line 26 and FIGs. 1 and 2. The first hook-up port includes a lever arm (44) which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when connected for receiving the chemical solution, see page 6, lines 17-26 and FIG. 2. A second hook-up port (42) is disposed within the second junction box and having an output connected to a second end

of the tubing, as shown on page 5, line 30 through page 6, line 26 and FIGs. 1 and 2. The second hook-up port includes a lever arm (44) which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when connected for receiving the chemical solution, see page 6, lines 17-26 and FIG. 2. The first and second hook-up ports form a closed system to equalize pressure and distribution of the chemical solution, as shown on page 12, lines 14-17 and FIG. 1. A second pressure regulator (70) is coupled in a portion of the tubing which is located in a rear portion of the yard for regulating pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 1. A booster pump (70) is coupled in a portion of the tubing which is located in the rear portion of the yard for increasing the pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 1.

With respect to claim 84, the present invention includes a chemical distribution system comprising a dwelling (12), as shown on page 4, lines 14-18 and FIG. 1. The system further includes an exposed area (14) adjacent to the dwelling, as shown on page 5, lines 17-21 and FIG. 1. A hollow tubing (50) is disposed around each of a plurality of target areas within the exposed area, see page 6, lines 27-29 and FIGs. 1-5. The tubing transports a chemical solution selected from the group consisting of pesticides, herbicides, fertilizers, animal retardants, and vegetation pre-emergence, see page 4, line 32 through page 5, line 7. The tubing is made of a chemical resistant

material selected from the group consisting of polyethylene, polyurethane, nylon, and polypropylene, see page 6, lines 31-34. The tubing has a plurality of openings cut through a first portion of its wall structure in accordance with government regulations and manufacturer's recommendations and a plurality of pre-drilled openings formed in a second portion of the tubing, see page 8, lines 11-19. A plurality of spray nozzles (58) is inserted into the openings in the first and second portions of the tubing for distributing the chemical solution to the plurality of target areas, see page 8, lines 19-32 and FIGs. 3-5. A first junction box (46) is disposed below ground in a front area of the dwelling, as shown on page 5, line 30 through page 6, line 26 and FIGs. 1 and 2. A first pressure regulator (68) is connected to the tubing within the first junction box for regulating pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 2. A first hook-up port (42) is disposed within the first junction box and having an output connected to a first end of the tubing, see page 5, line 30 through page 6, line 26 and FIGs. 1 and 2. The first hook-up port includes a lever arm (44) which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when coupled for receiving the chemical solution, see page 6, lines 17-26 and FIG. 2. A second pressure regulator (70) is coupled in a portion of the tubing which is located in a rear portion of the yard for regulating pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 1. A booster pump (70) is

coupled in a portion of the tubing which is located in the rear portion of the yard for increasing the pressure of the chemical solution, as shown on page 13, lines 1-12 and FIG. 1.

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Whether the drawings fail to comply with 37 C.F.R. 1.83(a).
2. Whether claims 74-89 are unpatentable under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification.
3. Whether claims 74-89 are unpatentable under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellant regards as the invention.

**VII. ARGUMENT**

**A. Legal Standard**

**i. Objection to the Drawings**

Under 37 C.F.R. § 1.83(a), the drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (e.g., a labeled rectangular box). In addition, tables and sequence listings that are included in the specification are, except for applications filed under 35 U.S.C. 371, not permitted to be included in the drawings."

**ii. 35 U.S.C. § 112, first paragraph**

The first paragraph of Section 112 provides that the specification shall contain a written description of the invention. The description requirement's purposes are to assure that the Applicant was in full possession of the claimed subject matter on the application filing date and to allow other inventors to develop and obtain patent protection for later improvements and subservient inventions that build on Applicant's teachings. The description requirement may come into play when a claim is added by an Applicant for a patent at some stage after the original filing date and the claim differs in scope from the original claims.

To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. The written specification can use such descriptions as words, structures, figures, diagrams, formulas, etc., that fully set forth the claimed invention. Although the exact terms need not be used in haec verba, the specification must contain an equivalent description of the claimed subject matter. *Eiselstein v. Frank*, 52 F.3d 1035, 1038, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995) ("[T]he prior application need not describe the claimed subject matter in exactly the same terms as used in the claims ..."). Thus, while there is no in haec verba requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure. *Fujikawa v. Wattanasin*, 93 F.3d 1559, 1570, 39 USPQ2d 1895, 1904 (Fed. Cir. 1996) ("ipsis verbis disclosure is not necessary to satisfy the written description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question."); *In re Alton*, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1584 (Fed. Cir. 1996) ("If a person of ordinary skill in the art would have understood the inventor to have been in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate written description requirement is met.").



**iii. 35 U.S.C. § 112, second paragraph**

The second paragraph of Section 112 provides that the specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the Applicant regards as his invention.

The primary purpose of this requirement of definiteness of claim language is to ensure that the scope of the claims is clear so the public is informed of the boundaries of what constitutes infringement of the patent. A secondary purpose is to provide a clear measure of what Applicants regard as the invention so that it can be determined whether the claimed invention meets all the criteria for patentability and whether the specification meets the criteria of 35 U.S.C. 112, second paragraph with respect to the claimed invention.

An Examiner's analysis of whether claims particularly point out and distinctly claim an invention must be analyzed in light of i) the content of the particular application disclosure, ii) the teachings of the prior art, and iii) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. M.P.E.P 2173.02. If the claim language is so vague or confusing that a person of ordinary skill in the art would be unable to determine the metes and bounds of the claims, then it may fail to satisfy the requirements of 35 U.S.C. § 112, second paragraph.

**B. Drawings objected to under 37 C.F.R. 1.83(a).**

The Office Action objects to the drawings under 37 C.F. R. 1.83(a). In particular, the Examiner states that the "Y and elbow couplings" recited in claims 74, 80, and 87; the "truck" recited in claims 74, 82, and 89; the "spray nozzles being circular in shape" recited in claims 74, 79, and 86; the "first hook-up port" and "second hook-up port" recited in claim 74 must be shown in the drawings or cancelled from the claims. Applicants traverse the objection. The "Y and elbow couplings" are described in paragraphs [0020] and [0022] of the subject specification as being used to split tubing 50 and hence are believed to be incorporated within the feature of tubing 50 shown in FIGS. 1, 4, and 5.

Returning to FIG. 1, from connector 42, just inside fence 16, chemical distribution system 40 splits with a portion running along foundation wall 52 of building structure 12 and a portion running along fence 16. A "Y" coupling or "T" coupling can be used to split tubing 50. Tubing 50 runs along side fence 16, past play area 32 to the corner of the fence behind tree 22. Fence 16 may be cinder block or wood construction. As shown in FIG. 4, fence 16 typically contains a number of posts or pillars 60 regularly spaced about 10-15 feet apart for supporting the main body of the fence. The cracks and crevices of the posts and pillars of fence 16 may be prime insect infestation sites. To increase the effectiveness of chemical distribution system 40, tubing 50 is routed up and down the posts and pillars 60 of fence 16.

An elbow connector can be used for tubing 50 to turn the corner of the fence behind tree 22. Otherwise, tubing 50 is sufficiently flexible to bend 90 degrees between the side and back fence 16. Tubing 50 then

runs along back fence 16, past pool 24, to the corner of the fence near garden 28. Again, tubing 50 is routed up and down the posts and pillars along back fence 16.

MPEP 608.02(d) states that structural details of sufficient importance should be described in the drawing. The "truck" is described in paragraph [0013] of the specification. In view of the written description in the specification, Applicants believe that the "truck" feature does not arise to a level that needs to be described in the drawings.

Chemical distribution system 40 includes a connector or hook-up port 42. The chemical application technician arrives with a truck containing the chemical solution, for example, a pesticide. The technician connects a high-pressure, chemical application hose reeled from the truck to connector or port 42. Once connected, the technician need no longer drag the chemical application hose around the property.

As for the "spray nozzles being circular in shape", this feature is described in paragraph [0018] of the specification. The spray nozzles are shown as element 58 in FIGs. 3 and 5. The circular feature is believed to be incorporated within the feature of spray nozzles 58 as supported by the specification.

The spray nozzles 58 are typically a non-corrosive metal such as brass or stainless steel and can be circular or cylindrical in shape with an aperture for releasing the chemical spray. The apertures of different nozzles can be set to have different flow rates and spray patterns. The aperture can be large or small and have "+" opening, circular opening, or

rectangular opening.

As for the "first hook-up port" and "second hook-up port" in claim 74, these features are shown in FIGs. 1 and 2 as hook-up ports 42, see paragraph [0013] and [0014]. FIG. 1 shows two (first and second) hook-up ports 42. FIG. 2 illustrates addition detail of the hook-up ports 42.

However, in the event that the rejections under 35 U.S.C. 112, first and second paragraphs, discussed below are overcome before the Board, and the only remaining issue is the objection under 37 C.F.R. 1.83(a), Appellants would be willing to amend the drawings in line with the above support from the specification. No new matter need be entered to comply with the Examiner's objection.

**C. Claims 74-89 are patentable under 35 U.S.C. § 112, first paragraph.**

The Office Action rejects claims 74-89 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Examiner states that the specification fails to teach the "government regulations and manufacturer's recommendations." Appellants traverse the rejection under 35 U.S.C. 112, first paragraph.

Based on the disclosure in the subject specification, Appellants submit that one of ordinary skill in the art would easily understand how to ascertain the relevant government regulations and manufacturer's recommendations.

[0017] The tubing 50 installed along foundation wall 52 may come pre-drilled with holes spaced at regular intervals. Alternatively, the installer may place solid tubing 50 along foundation wall 52, and then manually punch holes at selected locations with the punch tool. A spray nozzle or outlet 58 is inserted into each hole of tubing 50 along foundation wall 52 for dispensing and applying the chemical pesticide to the open target areas proximate to building structure 12 along foundation wall 52. The tubing 50 may have the outlets 58 pre-formed or integral to the tubing. The spray nozzle 58 includes an aperture through which the spray is directed and controlled. The selected locations for punch holes depend upon the pesticide manufacturer's recommended application instructions and any external structures 36 adjacent to or in proximity of foundation wall 52 that could interfere with the spraying pattern or otherwise unnecessarily be exposed to the chemical pesticide. The spray nozzles 58 are inserted into tubing 50 along foundation wall 52 for an even, complete, and directed coverage of the chemical pesticide to the outside ground areas proximate to building structure 12, in accordance with government regulations and manufacturer's recommendations. In one scenario, spray nozzles 58 are inserted into tubing 50 every 15 inches with breaks to avoid direct spray of the chemical pesticide on existing plants and other external structures 36 along foundation wall 52 which are not intended to be sprayed. The chemical solution applied to the target area will kill and eliminate the insects and pests in the open areas where the pesticide is applied.

[0027] A feature of chemical distribution system 40 is the ease of use and maintenance. Once installed, the system is efficient and effective to use. The technician connects the chemical application hose 49 to connector 42, sets the storage tank pressure in the truck, and begins pumping. The pesticide can be pumped through tubing 50 in liquid, mist, or gaseous state. The pesticide is dispensed from spray nozzles 58 onto the intended areas, in a concentration and coverage consistent with the manufacturer's recommendations and compliant with government

regulations. The chemical pesticide is thus distributed through fixed chemical distribution system 40 and applied with the proper concentrations to the desired external locations of the property to kill and eliminate insects and pests. The same process is applicable to weed control and fertilizer application. The technician's involvement is usually limited to connecting the application hose to connector 42, setting the storage tank pressure, and monitoring the spray volume and time. Otherwise, for the most part, chemical distribution system 40 is self-regulating. The process requires minimal judgment and action by the technician. The property owner and chemical application company owner have greater confidence that the pesticide is being properly applied and thoroughly distributed. The application process is more efficient, accurate, and requires much less time than manual application methods.

The government regulations and manufacturer recommendations are readily available from published literature and websites. Depending on the chemical application and location, the user would be able to readily find this information. In most cases, the user already knows the applicable government regulations and manufacturer recommendations from prior experience.

Accordingly, Appellants believe the specification properly supports the fact that the inventors had possession of the claimed invention. The claimed feature that "the tubing has a plurality of openings cut through its wall structure at selected points in accordance with government regulations and manufacturer's recommendations and corresponding to each of the plurality of target areas" is supported by the text in paragraphs [0017] and [0027] noted above.

Accordingly, Appellants request that the rejection under 35 U.S.C. 112, first paragraph be withdrawn.

**D. Claims 74-89 are patentable under 35 U.S.C. § 112, second paragraph.**

The Examiner rejects claims 74-89 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to point and distinctly claim the subject matter which Appellant regards as the invention.

Regarding claims 74, 78 and 84, the Examiner states that the recitation of regulation and recommendations render the claims indefinite because regulations and recommendations are subject to change.

Appellants traverse the rejection under 35 U.S.C. 112, second paragraph. Claims are interpreted as of the filing date of the subject application. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) "We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application."

Appellants submit that the government regulations and manufacturer recommendations are those existing as of the filing date of the application and can be readily determined. The invention merely requires compliance with the existing government regulation or manufacturer recommendation as of the filing date.

The structures in line 23 of claim 74 could refer to fence 16 or stakes 62 and therefore are not duplicative with residential home 12.

Accordingly, claims 74-89 are believe to comply with 35 U.S.C. 112, second paragraph.

**E. Conclusion**

When properly considered in view of the applicable legal standard, claims 74-89 are believed to comply with Patent Laws and Regulations. Appellants request reversal of the final rejection and allowance of the subject patent application.

Respectfully submitted,  
**QUARLES & BRADY LLP**

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**VIII. CLAIMS APPENDIX**

1-73. (Canceled)

74. (Previously presented) A chemical distribution system, comprising:

a residential home;

a yard in an exposed area adjacent to the residential home including a fence, gate, shrub, tree, swimming pool, patio, garden, grass area, play area, and concrete pad;

a hollow tubing disposed around each of a plurality of target areas in the yard including the fence, shrub, tree, garden, and grass area, the tubing transporting a chemical solution selected from the group consisting of pesticides, herbicides, fertilizers, animal retardants, and vegetation pre-emergence, the tubing being made of a chemical resistant material selected from the group consisting of polyethylene, polyurethane, nylon, and polypropylene, with a pressure rating of at least sixty pounds per square inch, the tubing having an inside diameter ranging from one-eighth inch to three-fourth inch and an outside diameter ranging from one-fourth inch to one inch, the tubing having a plurality of openings cut through its wall structure at selected points in accordance with government regulations and manufacturer's recommendations and corresponding to each of the plurality of target areas, the tubing including a plurality of "Y" and elbow couplings for changing direction of the tubing to cover the plurality of target areas, the tubing being routed up and down structures that extend vertically above ground secured with pressure-fit

clamps and otherwise laid above ground;

a plurality of spray nozzles inserted into the openings in the tubing for distributing the chemical solution to the selected target areas, the spray nozzles being circular in shape, made of non-corrosive metal and having adjustable flow rates and spray patterns;

a truck for transporting the chemical solution to the residential home, the truck including a hose for transporting the chemical solution to the tubing;

first and second junction boxes disposed below ground in a front area of the residential home;

a first pressure regulator connected to the tubing within the first junction box for regulating pressure of the chemical solution;

a first hook-up port disposed within the first junction box and having an output connected to a first end of the tubing, the first hook-up port including a lever arm which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when connected to the hose from the truck;

a second hook-up port disposed within the second junction box and having an output connected to a second end of the tubing, the second hook-up port including a lever arm which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when connected to the hose from the truck, wherein the first and second hook-up ports form a closed system to equalize pressure and distribution of the chemical

solution;

a second pressure regulator coupled in a portion of the tubing which is located in a rear portion of the yard for regulating pressure of the chemical solution; and

a booster pump coupled in a portion of the tubing which is located in the rear portion of the yard for increasing the pressure of the chemical solution.

75. (Previously presented) The chemical distribution system of claim 74, wherein the tubing is supported by stakes at selected target areas.

76. (Previously presented) The chemical distribution system of claim 74, wherein the plurality of spray nozzles is disposed about fifteen inches apart.

77. (Previously presented) The chemical distribution system of claim 74, wherein the tubing is pre-drilled with punch hole openings spaced at regular intervals one to twenty inches apart for dispensing the chemical solution.

78. (Previously presented) A fixed chemical distribution system, comprising:

a residential home;

a yard in an exposed area adjacent to the residential home;

a hollow tubing disposed around each of a plurality of target areas within the yard, the tubing transporting a chemical solution selected from the group consisting of pesticides, herbicides, fertilizers, animal retardants, and

vegetation pre-emergence, the tubing being made of a chemical resistant material selected from the group consisting of polyethylene, polyurethane, nylon, and polypropylene, the tubing having a plurality of openings cut through a first portion of its wall structure in accordance with government regulations and manufacturer's recommendations and a plurality of pre-drilled openings formed in a second portion of the tubing;

a plurality of spray nozzles inserted into the openings in the first and second portions of the tubing for distributing the chemical solution to the plurality of target areas;

first and second junction boxes disposed below ground in a front area of the residential home;

a first pressure regulator connected to the tubing within the first junction box for regulating pressure of the chemical solution;

a first hook-up port disposed within the first junction box and having an output connected to a first end of the tubing, the first hook-up port including a lever arm which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when connected for receiving the chemical solution;

a second hook-up port disposed within the second junction box and having an output connected to a second end of the tubing, the second hook-up port including a lever arm which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above

ground when connected for receiving the chemical solution, wherein the first and second hook-up ports form a closed system to equalize pressure and distribution of the chemical solution;

a second pressure regulator coupled in a portion of the tubing which is located in a rear portion of the yard for regulating pressure of the chemical solution; and

a booster pump coupled in a portion of the tubing which is located in the rear portion of the yard for increasing the pressure of the chemical solution.

79. (Previously presented) The fixed chemical distribution system of claim 78, wherein the spray nozzles are circular in shape, made of non-corrosive metal and have adjustable flow rates and spray patterns.

80. (Previously presented) The fixed chemical distribution system of claim 78, wherein the tubing includes a plurality of "Y" and elbow couplings for changing direction of the tubing to cover the target areas.

81. (Previously presented) The fixed chemical distribution system of claim 78, wherein the tubing is routed up and down structures that extend vertically above ground secured with pressure-fit clamps and otherwise laid above ground.

82. (Previously presented) The fixed chemical distribution system of claim 78, further including a truck for transporting the chemical solution to the residential

home, the truck including a hose for transporting the chemical solution to the tubing.

83. (Previously presented) The fixed chemical distribution system of claim 78, wherein the plurality of spray nozzles are disposed about fifteen inches apart.

84. (Previously presented) A chemical distribution system, comprising:

- a dwelling;

- an exposed area adjacent to the dwelling;

- a hollow tubing disposed around each of a plurality of target areas within the exposed area, the tubing transporting a chemical solution selected from the group consisting of pesticides, herbicides, fertilizers, animal retardants, and vegetation pre-emergence, the tubing being made of a chemical resistant material selected from the group consisting of polyethylene, polyurethane, nylon, and polypropylene, the tubing having a plurality of openings cut through a first portion of its wall structure in accordance with government regulations and manufacturer's recommendations and a plurality of pre-drilled openings formed in a second portion of the tubing;

- a plurality of spray nozzles inserted into the openings in the first and second portions of the tubing for distributing the chemical solution to the plurality of target areas;

- a first junction box disposed below ground in a front area of the dwelling;

- a first pressure regulator connected to the tubing

within the first junction box for regulating pressure of the chemical solution;

a first hook-up port disposed within the first junction box and having an output connected to a first end of the tubing, the first hook-up port including a lever arm which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when coupled for receiving the chemical solution;

a second pressure regulator coupled in a portion of the tubing which is located in a rear portion of the yard for regulating pressure of the chemical solution; and

a booster pump coupled in a portion of the tubing which is located in the rear portion of the yard for increasing the pressure of the chemical solution.

85. (Previously presented) The chemical distribution system of claim 84, further including:

a second junction box disposed below ground in a front area of the dwelling; and

a second hook-up port disposed within the second junction box and having an output connected to a second end of the tubing, the second hook-up port including a lever arm which lays horizontal within the junction box when not in use and rotates ninety degrees to a vertical position so that a fitting on an end of the lever arm extends above ground when coupled for receiving the chemical solution, wherein the first and second hook-up ports form a closed system to equalize pressure and distribution of the chemical solution.

86. (Previously presented) The chemical distribution system of claim 84, wherein the spray nozzles are circular in shape, made of non-corrosive metal and have adjustable flow rates and spray patterns.

87. (Previously presented) The chemical distribution system of claim 84, wherein the tubing includes a plurality of "Y" and elbow couplings for changing direction of the tubing to cover the target areas.

88. (Previously presented) The chemical distribution system of claim 84, wherein the tubing is routed up and down structures that extend vertically above ground secured with pressure-fit clamps and otherwise laid above ground

89. (Previously presented) The chemical distribution system of claim 84, further including a truck for transporting the chemical solution to the residential home, the truck including a hose for transporting the chemical solution to the tubing.



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**IX. EVIDENCE APPENDIX**

None.

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**X. RELATED PROCEEDINGS APPENDIX**

None.